AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (Canceled)

19. (Previously Presented) Aircraft having a cooling device for expelling heat from a heat source located in the interior of said aircraft to a heat sink, comprising:

a piping system sealed against the surrounding atmosphere, the piping system having a heat intake section thermally coupled with the heat source and a heat output section thermally coupled with the heat sink, and an essentially adiabatic conveyance section located therebetween, whereby the piping system is filled with a heat conveyance medium which, when heat is received in the heat intake section from the heat source, undergoes a transition from the liquid phase to the gaseous phase, then flows into the heat output section, then condenses when discharging heat to the sink, and then flows back to the heat intake section, wherein said heat sink includes a section of an external wall of the aircraft;

at least one heat exchanger which operatively couples the piping system to the heat source, thereby to cause heat transfer in the heat intake section;

a ventilator operatively connected to said at least one heat exchanger, the ventilator adapted to control the transfer of heat between said at least one heat exchanger and the heat source;

a temperature sensor located adjacent the heat source so as to detect the temperature thereof, the temperature sensor operatively connected to the cooling device so that the cooling device can respond to the temperature detected by the temperature sensor;

a regulator valve operatively connected to the piping system, thereby to control the quantity of heat conveyance medium flowing to or from the heat exchanger; and

a regulation device operatively connected to the ventilator and to the regulator valve so as to control the ventilator and the regulator valve according to the temperature detected by the temperature sensor.

20. (Previously Presented) Aircraft in accordance with claim 19,

whereby the piping system includes a closed pipe, one end section thereof being the heat intake section and the other end section thereof being the heat output section, and

whereby both end sections thereof are connected to one another via the conveyance section.

21. (Previously Presented) Aircraft in accordance with claim 19,

whereby the heat source includes at least one of the following components: an electronic device in the aircraft, an on-board kitchen in the aircraft, and a surface requiring cooling in the aircraft.

22. (Previously Presented) Aircraft in accordance with claim 19 further comprising:

means for controlling the flow of the heat conveyance medium between the heat intake section and the heat output section.

23-26. (Canceled).

27. (Currently Amended) Aircraft ~~in accordance with claim 19~~ having a cooling device for expelling heat from a heat source located in the interior of said aircraft to a heat sink, ~~further~~ comprising:

a piping system sealed against the surrounding atmosphere, the piping system having a heat intake section thermally coupled with the heat source and a heat output section thermally coupled with the heat sink, and an essentially adiabatic conveyance section located therebetween, whereby the piping system is filled with a heat conveyance medium which, when heat is received in the heat intake section from the heat source, undergoes a transition from the liquid phase to the gaseous phase, then flows into the heat output section, then condenses when discharging heat to the sink, and then flows back to the heat intake section, wherein said heat sink includes a section of an external wall of the aircraft;

at least one heat exchanger which operatively couples the piping system to the heat source, thereby to cause heat transfer in the heat intake section;

a ventilator operatively connected to said at least one heat exchanger, the ventilator adapted to control the transfer of heat between said at least one heat exchanger and the heat source;

a temperature sensor located adjacent the heat source so as to detect the temperature thereof, the temperature sensor operatively connected to the cooling device so that the cooling device can respond to the temperature detected by the temperature sensor; and

a cold storage unit (266) provided between the heat source and the heat sink, the cold storage unit collecting cooled liquid phase heat conveyance medium for use when cooling requirements are increased, such as when the aircraft is on the ground.

28. (Currently Amended) Aircraft in accordance with claim 19, further comprising:

a cold storage unit provided in the heat source, the cold storage unit collecting cooled liquid phase heat conveyance medium for use when cooling requirements are increased, such as when the aircraft is on the ground.

29. (Previously Presented) Aircraft in accordance with claim 19,

whereby the piping system forms a closed circuit which connects the heat source and the heat sink via a feed line and a discharge line, respectively.

30. (Previously Presented) Aircraft in accordance with claim 27,

whereby the cold storage unit is located in a special circuit with a special piping system.

31. (Previously Presented) Aircraft in accordance with claim 27,

whereby when the aircraft is in rest condition, the heat sink is located geodetically higher than the cold storage unit, which is further located geodetically higher than the heat source.

32. (Currently Amended) Method for the discharge of heat from a heat source located in the interior of an aircraft to a heat sink, the aircraft including a closed piping system sealed against the surrounding atmosphere, the piping system having a heat intake section thermally coupled to the heat source and a heat output section thermally coupled to the heat sink, and an essentially adiabatic transport section located therebetween, the piping system being filled with a heat conveyance medium which, when heat is taken from the heat source in the heat intake section, undergoes a transition from the liquid phase to the gaseous phase, then flows into the heat output section, then condenses as heat is discharged to the heat sink again and then flows back into the

heat intake section, wherein the heat sink includes a section of an external wall of the aircraft, comprising:

causing, via at least one heat exchanger which operatively couples the piping system to the heat source, heat transfer in the heat intake section; [[and]]

controlling, via a ventilator, the heat transfer between the at least one heat exchanger and the heat source; and

controlling, via a regulator valve disposed between the heat intake section and the heat output section, the quantity of heat conveyance medium flowing to and from the at least one heat exchanger.

33. (New) Method in accordance with claim 32, wherein the aircraft includes a cold storage unit provided between the heat sink and the heat source, the method further comprising:

storing cooled liquid phase heat conveyance medium in the cold storage unit while the aircraft is flying.

34. (New) Method in accordance with claim 33, further comprising:

releasing stored liquid phase heat conveyance medium from the cold storage unit to the heat source when the aircraft has an increased cooling requirement, such as when the aircraft is on the ground.